

We claim:

1. A reagent, comprising:
  - a fluid medium containing a first substrate having a first binding species attached thereto; and
  - a second substrate having binding regions characterized by their ability to selectively bind said first binding species if dissociated from said first substrate.
2. The reagent of claim 1, wherein the first binding species is attached to a defined binding surface on the first substrate, and the binding regions on the second substrate are formed on a defined binding surface on the second substrate, and wherein the defined binding surface on the first substrate and the defined binding surface on the second substrate are formed of the same materials.
3. The reagent of claim 1, wherein the first binding species is attached to a defined binding surface on the first substrate, and the binding regions on the second substrate are formed on a defined binding surface on the second substrate, and wherein the defined binding surface on the first substrate and the defined binding surface on the second substrate are formed of different materials.
4. The reagent of claim 1, wherein said first binding species is selected from the group essentially consisting of biotin, avidin, streptavidin, an antigen, an antibody, a hapten, a receptor and an oligonucleotide, and bindable derivatives thereof.
5. The reagent of claim 4, wherein said binding partner selectively binds species selected from the group essentially consisting of biotin, avidin, streptavidin, an

antigen, an antibody, a hapten a receptor and an oligonucleotide, and bindable derivatives thereof.

6. The reagent of claim 1, wherein said binding regions are selected from the group consisting of pores, interstitial spaces, indentations and grooves.

7. A reagent, comprising:

a fluid medium including a binding species attached to a substrate;

a permeable material including an inner surface having an affinity for said binding species; and

an outer surface permeable to the binding species when dissociated from said substrate.

8. The reagent of claim 7, wherein the binding species is selected from the group essentially consisting of biotin, avidin, streptavidin, an antigen, an antibody, a hapten, a receptor and an oligonucleotide, and bindable derivatives thereof.

9. A method of stabilizing a reagent through the inactivation of a free species, comprising:

providing a reagent storage container including a liquid medium containing a binding species attached to a substrate;

a permeable material including an inner surface having an affinity for said binding species; and

an outer surface permeable to the binding species when dissociated from said substrate.

10. The reagent of claim 9, wherein the first binding species is attached to a defined binding surface on the first substrate, and the binding regions on the second substrate are formed on a defined binding surface on the second

substrate, and wherein the defined binding surface on the first substrate and the defined binding surface on the second substrate are formed of the same materials.

11. The method of claim 10, wherein the binding species is selected from the group essentially consisting of biotin, avidin, streptavidin, an antigen, an antibody, a hapten, a receptor and an oligonucleotide, and bindable derivatives thereof.

12. A reagent, comprising:

- a fluid medium;

- a first substrate in contact with the fluid medium;

- a first binding species, wherein a first portion of the first binding species is attached to the first substrate and a second portion of the first binding species is dissociated from the first substrate; and

- a second substrate having regions adapted to selectively bind the second portion of the first binding species,

- wherein the first portion of the first binding species and the second portion of the first binding species, when combined, make up approximately 100% of the known total amount of the first binding species.

13. A reagent comprising:

- a fluid medium containing a first substrate having a first binding species attached thereto; and

- a second substrate having regions characterized by their ability to selectively bind said first binding species,

- wherein binding of first binding species to said second substrate does not impair the binding of first binding species to a binding target.

14. A reagent, comprising:

a fluid medium containing a first substrate having a first binding species attached thereto; and

a second substrate having regions characterized by their ability to selectively bind said first binding species if dissociated from said first substrate and regions characterized by their ability to selectively bind first binding species associated with said first substrate,

wherein the second substrate binds a plurality of first binding species to a common second substrate, and

wherein an aggregate is formed comprising the plurality of first substrate having first binding species attached thereto, cross-linked by said second substrate.

15. The reagent of claim 14, wherein the first binding species is attached to a defined binding surface on the first substrate, and the binding regions on the second substrate are formed on a defined binding surface on the second substrate, and wherein the defined binding surface on the first substrate and the defined binding surface on the second substrate are formed of the same materials.

16. The reagent of claim 14, wherein the first binding species is attached to a defined binding surface on the first substrate, and the binding regions on the second substrate are formed on a defined binding surface on the second substrate, and wherein the defined binding surface on the first substrate and the defined binding surface on the second substrate are formed of different materials.

17. A method of reducing the signal to noise ratio amplifying a signal in an assay comprising:

providing a fluid medium containing a first substrate having at least one first binding species; and

providing a second substrate having regions characterized by their ability to bind said first binding species if dissociated from said first substrate and also to bind said first substrate having said first binding species attached.

18. The method of claim 17, wherein said first substrate comprises a plurality of particles.

19. The method of claim 17, wherein said regions bind said first binding species from a plurality of particles.

20. The method of claim 17, wherein said second substrate is selected from the group consisting of latex particles, proteins such as bovine serum albumin (BSA), human serum albumin (HSA), antibodies, or polymers such as poly-BSA, poly-antibodies, dextrans, and dendrimers.

21. The method of claim 20, wherein said regions characterized by their ability to selectively bind said first binding species if dissociated from said first substrate are adapted to exclude said first species associated with said first substrate.